

1997 Wood Processor Report

including Import/Export Information

Data Collected Under the Provisions of

Title 12 MRSA §8884

January 1999



Maine Forest Service
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What is in this report?

This report shows the volume of wood that was processed by Maine mills, imported from out of state, and exported from Maine without processing during 1997.

- Tables display wood flow details for: Sawlogs, Pulpwood, Biomass Chips and Imports and Exports.
- Sawlogs and Pulpwood figures appear in a species-by-county matrix.
- Biomass figures appear by county.
- Import and export figures are tallied by species only.

How was this information collected?

The Maine Forest Service (MFS) collects information on woodflow through the Annual Wood Processor Report. The information contained in this report is based on the 1997 wood processor reporting forms.

For 1997, reports were received from 333 primary processing mills, 234 loggers and brokers who may have exported, and from 58 mills that burn some form of wood for energy. These businesses report wood volumes processed by species and county of origin.

What is the purpose of the Wood Processor Report

Each year, the Maine Forest Service collects information from Maine primary wood processors regarding the volumes of wood processed in Maine. Information is also collected for volumes imported or exported to or from Maine. Volume information contained in these reports is confidential and by law shall not be made public except that summary reports may be published using aggregated data which does not reveal the activities of an individual person or firm (under the provisions of 12MRSA § 8884, "Forest Landowner and Wood Processor Reporting Requirements"). Information in this database is tabulated and used for additional purposes as well.

Notes on reading this report.

This wood processor report is arranged so that you can look up volumes by county, imports, exports, and state totals. Maine's sixteen counties are listed here.

Androscoggin	Hancock	Oxford	Somerset
Aroostook	Kennebec	Penobscot	Waldo
Cumberland	Knox	Piscataquis	Washington
Franklin	Lincoln	Sagadahoc	York

The information provided for each county is organized into three (3) major product sections.

Product	*Unit of Measure
Sawlogs	MBF
Pulpwood	cords
Biomass Chips	green tons

*Note: Volumes also appear as cords (on the summary page) for the purpose of having a common measurement unit for comparison and for calculating grand totals across product types.

Wood flow is tallied by: Sawlogs, Pulpwood and Biomass Chips.

Sawlog Species in this report

Soft wood	Spruce & Fir	White & Red Pine	Hemlock	Cedar	Other Softwood				
Hard wood	Beech	White Birch	Yellow Birch	Sugar Maple	Red(soft) Maple	Oak (all)	Ash (all)	Aspen	Other Hardwood

Pulpwood Species in this report

Softwood	Spruce & Fir	White & Red Pine	Hemlock	Cedar	Other Softwood
Hardwood	Aspen	Other Hardwood			

Biomass Chips in this report

All Species

Definitions and Notes

1. **Biomass Chips** are produced in the woods using the entire tree, stem or bole, branches and top. These chips usually go to wood to energy facilities; however they are suitable for sludge composting, play ground padding, and mulch.
2. **Bole/Stem Chips** are usually produced in the woods using portable chippers and are made from the lower portion of the tree minus limbs and top. These chips may not be bark free but are suitable for use in pulp mills. There are some stationary tree-length chipping operations.
3. **Cords** (cfs) (MFS Rules Chapter 20 Definition). A "cord" is a unit of measure of wood products 4 feet wide, 4 feet high, and 8 feet long, or its equivalent, containing 128 cubic feet when the wood is stacked and well stowed. Any voids that will accommodate a stick, log or bolt of average dimensions to those in the pile shall be deducted from the measured volume.
4. **Hog fuel** is any woody residue from the woods or mills (such as sawdust, bark, and shavings) and can be biomass chips measured in either green or dry (bone dry) tons.
5. **Mill residues** are clean, pulp quality chips, made from slabs and edgings at sawmills, etc. Measured in green tons, mill residues come from the sawlog component of the volumes reported and therefore are not drain figures. They do make up a part of the volumes of fiber used to make pulp and should be added to the volume of pulpwood to get the total amount of wood used to make paper.
6. **Pulpwood** includes: tree length; long length; 4', 8', 16'; bole or stem chips converted to cords for comparison with previous figures.
7. **Sawlogs** includes sawlogs, studwood, palletwood, boltwood and veneer.
8. **Thousand board feet (MBF)** One thousand board feet. One board foot is a piece of wood 1" thick by 12" long by 12" wide.

Interpreting Harvest, Export, Import, and Processed by the Maine Forest Products Industry

- **Maine wood processed** is wood that was harvested in Maine and utilized by a Maine primary processing facility.
- **Exported from Maine without processing** is wood that was harvested in Maine and exported out of the state without primary processing by a Maine mill.
- **Imported from out-of-state** is wood that is imported from out of state (not harvested in Maine) and primary-processed by a Maine mill.
- **Total processed by Maine Forest Products Industry** is the amount of wood that was primary-processed in Maine regardless of origin.
- Pulpwood figures include pulp-quality bole or stem chips that are produced by many of Maine's whole tree chipper operators. These chippers also produce biomass which is burned for energy by many mills and wood-fired electrical generating facilities.
- Conversions: 1 MBF = 2 cords 1 cord = 2.5 green tons

Sawlogs¹ Woodflow in Maine as Reported to the Maine Forest Service (Converted to MBF)

County	Softwood						Hardwood										All Species
	Spruce & Fir	White & Red Pine	Hemlock	Cedar	Other Softwood ²	Total Softwood	Beech	White Birch	Yellow Birch	Sugar Maple	Red Maple	Oak	Ash	Aspen	Other Hardwood	Total Hardwood	Grand Total
Androscoggin	195	7,440	1,645	79	0	9,359	243	384	112	115	105	326	104	94	242	1,725	11,084
Aroostook	135,995	3,651	6,842	22,856	1,460	170,804	2,897	5,409	2,145	7,564	6,077	175	1,531	105,965	3,759	135,522	306,326
Cumberland	219	25,027	2,774	0	0	28,020	361	252	138	65	301	525	27	7	420	2,096	30,116
Franklin	14,823	28,710	261	102	3	43,899	1,555	7,591	4,109	8,925	3,088	796	1,023	371	444	27,902	71,801
Hancock	20,538	9,755	7,827	536	19	38,675	98	1,590	228	615	135	44	163	1,227	15	4,115	42,790
Kennebec	213	19,415	2,040	120	0	21,788	139	1,154	168	143	307	1,421	216	206	84	3,838	25,626
Knox	534	2,992	183	0	1	3,710	25	456	10	46	37	212	4	13	0	803	4,513
Lincoln	350	6,181	432	1	1	6,965	15	263	145	161	162	891	323	401	2	2,363	9,328
Oxford	10,964	47,149	2,753	1	0	60,867	3,228	6,383	3,044	3,145	2,251	2,761	1,033	368	3,061	25,274	86,141
Penobscot	82,618	21,683	22,430	3,948	58	130,737	2,778	4,430	1,557	3,405	2,694	203	1,466	1,018	221	17,772	148,509
Piscataquis	83,279	9,825	5,770	794	15	99,683	1,442	4,541	1,522	5,715	2,869	269	1,279	624	99	18,360	118,043
Sagadahoc	35	2,279	263	1	0	2,578	10	93	1	0	11	201	5	2	10	333	2,911
Somerset	32,568	11,340	821	1,180	84	45,993	2,269	5,739	1,174	3,876	2,331	589	747	1,927	467	19,119	65,112
Waldo	3,769	13,207	1,860	371	4	19,211	62	1,799	47	226	89	515	311	102	39	3,190	22,401
Washington	27,424	7,348	15,057	619	40	50,488	33	722	94	93	94	14	81	2,636	213	3,980	54,468
York	74	20,218	1,225	0	3	21,520	58	50	23	49	87	187	26	4	83	567	22,087
Maine wood processed	413,598	236,220	72,183	30,608	1,688	754,297	15,213	40,856	14,517	34,143	20,638	9,129	8,339	114,965	9,159	266,959	1,021,256
+ Exported from Maine without processing	357,854	25,624	7,294	21,895	57	412,724	915	1,846	6,564	16,335	3,569	5,323	3,548	8,133	11,685	57,918	470,642
= Total harvested from Maine forests	771,452	261,844	79,477	52,503	1,745	1,167,021	16,128	42,702	21,081	50,478	24,207	14,452	11,887	123,098	20,844	324,877	1,491,898
Imported from out of state	63,358	44,523	1,849	10,641	0	120,371	1,537	8,812	3,224	3,396	2,838	1,928	785	26,192	2,234	50,946	171,317
Total processed by Maine forest products industry	476,956	280,743	74,032	41,249	1,688	874,668	16,750	49,668	17,741	37,539	23,476	11,057	9,124	141,157	11,393	317,905	1,192,573

Notes: 1. *Sawlogs* includes logs, veneer, boltwood, studwood, palletwood, etc. Cords converted to MBF @ 2 cords = 1 MBF.

2. *Other Softwood* includes larch, pitch pine, and a few others.

Pulpwood Woodflow in Maine as Reported to the Maine Forest Service (converted to cords)

County	Softwood						Hardwood			All Species
	Spruce & Fir	White & Red Pine	Hemlock	Cedar	Other softwood ¹	Total pulpwood	Aspen ²	Other ³ hardwood	Total roundwood	Grand Total
Androscoggin	4,204	21,903	6,349	0	0	32,456	4,899	26,577	31,476	63,932
Aroostook	88,210	2,005	41,389	0	2,080	133,684	6,752	317,252	324,004	457,688
Cumberland	1,760	30,070	8,338	0	149	40,317	2,428	19,941	22,369	62,686
Franklin	54,241	14,819	16,931	0	0	85,991	18,346	145,155	163,501	249,492
Hancock	58,630	7,091	8,222	0	67	74,010	4,958	76,718	81,676	155,686
Kennebec	19,176	21,611	56,844	0	0	97,631	11,494	29,554	41,048	138,679
Knox	24,063	5,748	1,558	0	0	31,369	1,799	10,504	12,303	43,672
Lincoln	12,147	12,160	2,154	0	0	26,461	1,514	5,533	7,047	33,508
Oxford	45,387	39,023	36,845	0	1,385	122,640	20,875	139,572	160,447	283,087
Penobscot	116,726	20,148	73,260	0	14	210,148	23,000	263,514	286,514	496,662
Piscataquis	113,309	7,065	20,031	0	0	140,405	18,856	363,483	382,339	522,744
Sagadahoc	1,964	5,739	1,826	0	0	9,529	1,315	2,880	4,195	13,724
Somerset	82,899	11,659	28,794	0	0	123,352	26,594	272,417	299,011	422,363
Waldo	38,216	10,036	6,178	0	98	54,528	10,228	37,192	47,420	101,948
Washington	30,573	7,844	3,477	0	196	42,090	833	70,499	71,332	113,422
York	542	31,164	6,046	0	0	37,752	2,594	16,221	18,815	56,567
Maine wood processed	692,047	248,085	318,242	0	3,989	1,262,363	156,485	1,797,012	1,953,497	3,215,860
+ Exported from Maine without processing	100,419	5,475	1,839	9,900	517	118,150	19,111	116,986	136,097	254,247
= Total harvested from Maine forests	792,466	253,560	320,081	9,900	4,506	1,380,513	175,596	1,913,998	2,089,594	3,470,107
+ Imported from out of state	250,105	59,408	85,703	0	2,644	397,860	119,321	546,771	666,092	1,063,952
Total processed by Maine Forest Products Industry	942,152	307,493	403,945	0	6,633	1,660,223	275,806	2,343,783	2,619,589	4,279,812

Notes

1. Other softwood is comprised of bole chips for which specific species information was not collected.
2. Aspen volumes are based on pure loads.
3. "Other hardwood" is comprised of all hardwood species except aspen sold in pure loads.

Mill residues: 1,609,509 tons of mill residues were obtained from Maine sawmills, boltermills, and for manufacture into pulp. These figures are not included in the pulpwood volumes presented elsewhere in this report. This does not represent a drain on the forest resource; but rather, a further utilization of wood already included in the tally.

Biomass Chips

*Woodflow in Maine as reported to
the Maine Forest Service (in green tons)*

	All species
Androscoggin	17,731
Aroostook	249,827
Cumberland	45,788
Franklin	195,029
Hancock	59,962
Kennebec	15,512
Knox	3,597
Lincoln	12,348
Oxford	59,298
Penobscot	99,202
Piscataquis	94,197
Sagadahoc	5,608
Somerset	314,702
Waldo	4,330
Washington	22,919
York	84,766
Maine wood processed	1,284,816
+ Exported from Maine without processing	60,079
= Total harvested from Maine forests	1,344,895
+ Imported from out of state	463,494
Total processed by Maine Forest Products Industry	1,748,310

Note

Biomass Chips are produced in the woods using the entire tree, stem or bole, branches and top. These chips usually go to wood to energy facilities. They are also used for sludge composting, play ground padding and mulch.

1997

Wood Import and Exports

Origins and Destinations

To and From the State of Maine

Import Origins	Export Destinations
<ul style="list-style-type: none"> • Connecticut • Massachusetts • New Hampshire • New York • Pennsylvania • Rhode Island • Vermont 	<ul style="list-style-type: none"> • Connecticut • Indiana • Michigan • New Hampshire • Ohio • Vermont • Virginia • Wisconsin
<ul style="list-style-type: none"> • Canada <ul style="list-style-type: none"> New Brunswick Nova Scotia Prince Edward Island Quebec 	<ul style="list-style-type: none"> • Canada <ul style="list-style-type: none"> New Brunswick Nova Scotia Quebec • Iceland • Switzerland

Please send your comments or corrections to the
Maine Forest Service, 22 SHS, Augusta, Maine 04333

1997 Wood Processor Report: Maine Forest Service, January 1999

Summary: Woodflow in Maine as Reported to the Maine Forest Service for 1997

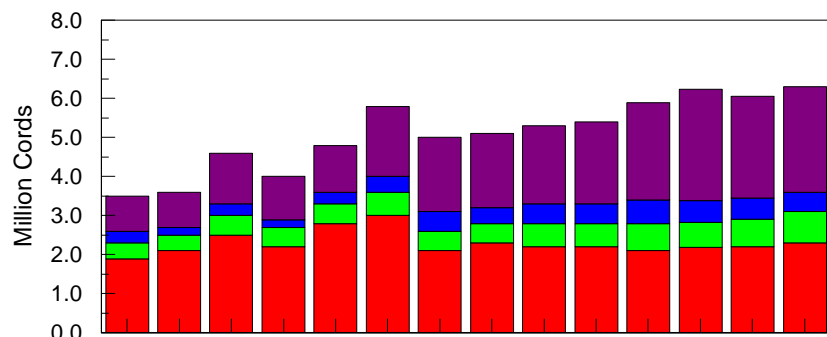
Product		Harvest Export, Import & Processed by Maine Forest Products Industries	Total Volume in 1997	Volumes converted to cords
Sawlogs (in MBF) 1 MBF = 1000 board feet	a	Maine wood processed	1,021,256	2,042,512
	b	Exported from Maine without processing	470,642	941,284
	c	Total harvested from Maine forests (a + b = c)	1,491,898	2,983,796
	d	Imported from out of state	170,957	341,914
	e	Total processed by Maine Forest Products Industry (a + d = e)	1,192,213	2,384,426
Pulpwood (in cords)	a	Maine wood processed	3,215,860	3,215,860
	b	Exported from Maine without processing	254,247	254,247
	c	Total harvested from Maine forests (a + b = c)	3,470,107	3,470,107
	d	Imported from out of state	1,063,952	1,063,952
	e	Total processed by Maine Forest Products Industry (a + d = e)	4,279,812	4,279,812
Biomass Chips (in green tons)	a	Maine wood processed	1,284,816	513,926
	b	Exported from Maine without processing	60,079	24,032
	c	Total harvested from Maine forests (a + b = c)	1,344,895	537,958
	d	Imported from out of state	463,494	185,398
	e	Total processed by Maine Forest Products Industry (a + d = e)	1,748,310	699,324
Totals	a	Maine wood processed		5,772,298
	b	Exported from Maine without processing		1,219,563
	c	Total harvested from Maine forests (a + b = c)		6,991,861
	d	Imported from out of state		1,591,264
	e	Total processed by Maine Forest Products Industry (a + d = e)		7,363,562

Note on conversions -- Sawlogs: 1 mbf = 2 cords Whole Tree Chips & Biomass: 1 cord = 2.5 green tons

Wood Harvesting Trends in Maine, 1960 to 1997

The Maine Forest Service has been collecting data on the volume of wood harvested since the late 1940's. The following charts illustrate wood harvesting trends over the past 35 years.

**Harvest of Commercially Important Species in Maine, 1960 to 1997
Sawlogs and Pulpwood Combined**

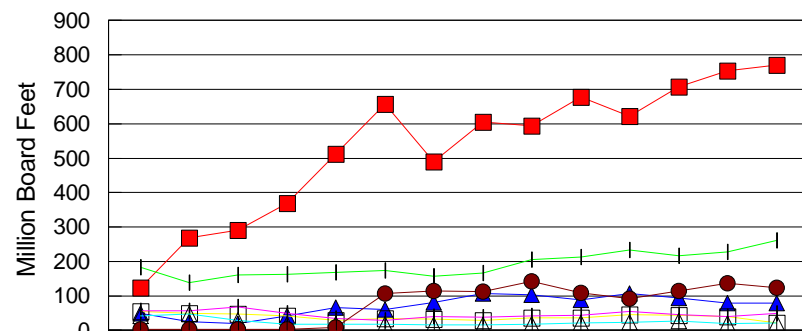


	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
■ Spruce & Fir	1.9	2.1	2.5	2.2	2.8	3.0	2.1	2.3	2.2	2.2	2.1	2.2	2.2	2.3
■ Pine	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.7	0.6	0.7	0.8
■ Hemlock	0.3	0.2	0.3	0.2	0.3	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.5	0.5
■ Hardwood	0.9	0.9	1.3	1.1	1.2	1.8	1.9	1.9	2.0	2.1	2.5	2.8	2.6	2.7

The graph above shows harvest volumes for commercially important species only. The total harvests are slightly higher.

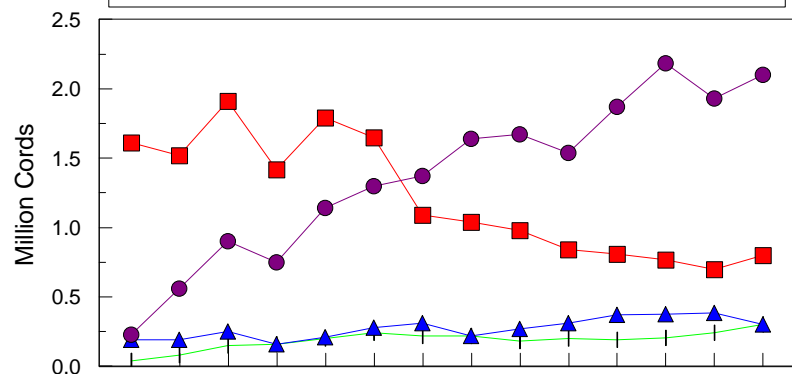
- The volume of spruce and fir harvested peaked during the mid 1980's in response to the spruce budworm epidemic.
- Spruce and fir harvest volume has stabilized since 1990.
- The harvest of hardwood species has increased during the 1990's, as paper makers substitute hardwood for spruce and fir pulp. (See Pulpwood Harvest Levels at right.)

Harvest Levels of Selected Sawlogs in Maine, 1960 to 1997



	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
■ Spruce & Fir	124	269	292	370	512	657	490	605	594	677	622	707	754	771
■ Pine	184	138	160	163	169	174	156	166	205	212	233	216	228	262
■ Hemlock	49	26	20	42	66	61	80	108	104	88	107	94	79	79
■ White Birch	54	48	48	42	29	35	33	29	36	36	45	43	40	21
■ Sugar Maple	57	57	67	50	34	29	40	39	42	45	55	45	41	50

Pulpwood Harvest Levels in Maine, 1960 - 1997



	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
■ Spruce & Fir	1.6	1.5	1.9	1.4	1.8	1.6	1.1	1.0	1.0	0.8	0.8	0.8	0.7	0.8
■ Pine	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
■ Hemlock	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.3
■ Hardwood	0.2	0.6	0.9	0.8	1.1	1.3	1.4	1.6	1.7	1.5	1.9	2.2	1.9	2.1
Total Pulp	2.1	2.4	3.2	2.5	3.3	3.5	3.0	3.1	3.1	2.9	3.2	3.5	3.3	3.5